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Regarding: "Carotid angioplasty and stenting in anatomically high-risk patients: Safe and durable except for radiation-induced stenosis"

Shin et al[1] described the technical feasibility and durability of CAS in supposed medically (MED; 132 patients) or anatomically (ANAT; 98 patients) high-risk patients using Sapphire criteria.[2] Innocent readers might hail CAS as the treatment of choice in the majority of these "high risk" patients.

The ANAT cohort (overall 30 day stroke/death rate 3%) comprised 16 (6%) patients with previous neck radiation, who showed an increased rate (22.2%) of restenosis. Surprisingly, the preprocedural cerebral status of these 16 patients was not reported separately, but less than one-third of the ANAT cohort had been symptomatic prior to carotid artery stenting (CAS). As in Sapphire,[2,3] "high risk for surgery" should not be mixed up with "high risk for stroke." Although a patient with asymptomatic >70% stenosis with previous radiation might be considered anatomically high risk, this patient is certainly not at high risk for stroke and should therefore not be offered high-risk (endovascular) carotid revascularization. The very same accounts for patients with asymptomatic restenosis following prior carotid endarterectomy (CEA), who comprised 70% of the ANAT cohort. At the level of perioperative risk as reported in Sapphire, all potential benefit from any intervention ceases, and neither surgery nor angioplasty can ever prevent long-term stroke in these asymptomatic patients.

Treating asymptomatic patients by CAS because of clinical factors that make them high risk for other events than stroke will do little to reduce the overall risk of stroke in the general population. Clinicians that uncritically implement CAS justified on Sapphire outcomes will not do their patients any service.

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Reply

I deplore the loss of the Age of Innocence. It is obvious to any "innocent" or open-minded reader that the purpose of this manuscript is not to endorse liberal use of carotid artery stenting (CAS) in asymptomatic patients, but simply to present our experience with patients with hostile neck undergoing CAS, and, in particular, in patients with radiation-induced stenosis. Contrary to the quoted 3% combined 30-day stroke/death rate, the actual rate in our anatomically high-risk cohort was 2%, which highlights that CAS can be performed safely in patients with hostile neck. In fact, this early outcome is within the recommended threshold of 3% combined stroke/death rate for carotid endarterectomy for asymptomatic carotid stenosis. To further correct the above letter, we do not